

COVID-19 Country Response Analysis – April No. 3

Global Situation¹

2,064,115 cases (as of 2pm AEST)

137,020 deaths

Trends

The global number of new daily reported infections increased from 71,572 on 13 April to 73,966 on 14 April but is significantly lower than the peak of 94,629 cases reported on 10 April. The global number of daily deaths spiked on 14 April to 6,983 from 5,421 the previous day. This increase was influenced by a jump in reported deaths in France of 1,438 due to a 3 day delay in reporting deaths in nursing homes over Easter and a record daily number of deaths in the U.S.

In contrast to France and most other European countries, the U.K. is not including COVID-19 associated deaths in care homes in the official death figures. The country has reported 12,868 deaths in hospitals but the true national figure may be as much as 40% higher. COVID-19 outbreaks have been reported in more than 2,000 care homes (18% of the total number) in the U.K. The number of deaths in the U.S. on 15 April (2,494) was the highest since the epidemic began². The University of Washington modelling had predicted that 14 April would be the peak of deaths in the U.S.

The global case-fatality ratio (CFR) is stable at 6.7%.

The daily number of new COVID-19 cases in the nine most affected countries outside of China is declining although the trend in Belgium is unstable and there was a small increase in Spain on 14 April³. Italy's daily case count has decreased by 52% since 30 March. The highest daily increases in cases among countries with more than 5,000 cases on 15 April were Mexico (17%), Russia (16%), Brazil (14%), Japan (13%) and Peru (11%).

The daily number of new cases in Singapore was 447 on 15 April, the largest daily increase (15%) since the beginning of the pandemic. This clearly represents a second wave.

The U.K. has tested 313,769 people for SARS-CoV -2 of whom 98,476 have tested positive (31.4%). This compares with a positivity rate of 19.7% in the U.S. (41% in New York State and 10.7% in California). These positivity rates compare with 1.7% in Australia.

¹ <https://coronavirus.jhu.edu/>

² <https://www.washingtonpost.com/world/2020/04/15/coronavirus-latest-news/>

³ The nine countries are the U.S., Spain, Italy, France, U.K., Iran, Belgium, Germany, Netherlands.

Australia

6462 cases

63 deaths

Trends

The number of daily new cases continues to be less than 50 for the fourth day in a row.

The only state that has been reporting an increase in daily cases is Tasmania where more than 50% of cases are linked to a cluster in the northwest of the state. Ten cases have been confirmed at a Western Sydney aged care home.

Deaths linked to coronavirus spread on the Ruby Princess have reached 19 – 30% of all COVID-19 deaths in Australia.

Issues related to COVID-19

Rates of SARS-Cov-2 Testing

The rates of testing around the world have varied greatly due to supply issues (testing capacity) and demand issues (testing criteria). While not based on a statistical analysis it appears that in countries with a high number of people tested per million population the case-fatality ratio (CFR) tends to be low. However, there are exceptions (eg, Bahrain) and the CFR is confounded by other variables such as the age structure of the population.

The following table shows a sample of countries, their testing rates and CFRs.

	Population	Tests per million	Case-fatality ratio
Iceland	364,000	109,558	0.5%
UAE	9.9 million	77,550	0.6%
Luxembourg	626,000	49,080	2%
Switzerland	8.7 million	22,993	4.7%
Bahrain	1.7 million	42,464	8.5%
Norway	5.4 million	24,020	2.2%
Germany	83.8 million	20,669	2.8%
Portugal	10.2 million	20,430	3.3%
Italy	60.5 million	18,481	13.1%
Australia	25 million	14,580	1%
US	331 million	9,845	4.4%
UK	67.9 million	5,876	13%
France	65.3 million	5,154	11.6%
Brazil	212.6 million	296	6.3%
Indonesia	273.5 million	132	9.1%



Case Study: Iceland

Spread of SARS-CoV-2 in the Icelandic Population. NEJM. 14/Apr/2020. DOI: 10.1056/NEJMoa2006100

METHODS

Testing was targeted to persons living in Iceland who were at high risk for infection (mainly those who were symptomatic, had recently traveled to high-risk countries, or had contact with infected persons). The authors also carried out population screening using two strategies: issuing an open invitation to 10,797 persons and sending random invitations to 2283 persons. They sequenced SARS-CoV-2 from 643 samples.

RESULTS

As of April 4, a total of 1221 of 9199 persons (13.3%) who were recruited for targeted testing had positive results for infection with SARS-CoV-2. Of those tested in the general population, 87 (0.8%) in the open-invitation screening and 13 (0.6%) in the random-population screening tested positive for the virus. In total, 6% of the population was screened. Most persons in the targeted-testing group who received positive tests early in the study had recently traveled internationally, in contrast to those who tested positive later in the study.

Children under 10 years of age were less likely to receive a positive result than were persons 10 years of age or older, with percentages of 6.7% and 13.7%, respectively, for targeted testing; in the population screening, no child under 10 years of age had a positive result, as compared with 0.8% of those 10 years of age or older. Fewer females than males received positive results both in targeted testing (11.0% vs. 16.7%) and in population screening (0.6% vs. 0.9%). The haplotypes of the sequenced SARS-CoV-2 viruses were diverse and changed over time. The percentage of infected participants that was determined through population screening remained stable for the 20-day duration of screening.

CONCLUSIONS

In a population-based study in Iceland, children under 10 years of age and females had a lower incidence of SARS-CoV-2 infection than adolescents or adults and males. The proportion of infected persons identified through population screening did not change substantially during the screening period, which was consistent with a beneficial effect of containment efforts.

